

<i>Psithyrus crawfordi</i> Franklin . .	49	0	—
<i>Psithyrus fernaldae</i> Franklin . .	2	0	—
Total	275	2	0

Two days later, on June 12, male bumblebees were observed in great abundance at Wawona, Mariposa County; a few queens were present but no workers were observed. One additional observation may also be mentioned. On May 6, 1943, a male of *Bombus edwardsii* was captured on the campus of the University of California at Berkeley.

Frison (*in litt.*) suggests that the early production of males may be characteristic of several species of the subgenus *Pratobombus* and that the sexes mate early and the queens then aestivate.

THE SHIFT FROM AQUATIC TO AERIAL RESPIRATION IN DRAGONFLIES.

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Three nymphs of the very pretty little dragonfly that Linnaeus called *Libellula ornata* (now placed in *Celithemis*) were collected from a shallow flat-woods pond near Englewood, Florida, on the first day of March. Two of these nymphs showed by the crumpling of their developing wings, as seen through the transparent sheaths, that they were nearing their time of transformation. So I placed them in a wire-cloth pillow cage where I could watch the remaining phases of their nymphal behavior.

Both these nymphs made shifts of position that had to do with the change from aquatic to aerial respiration. Each in its turn (they were two days apart) climbed up the cloth into the air just far enough to expose its high-placed mesothoracic spiracles at the surface film of the water, as if to start them to breathing free air. Then it stayed there head up and motionless for one day.

Then each moved forward again up the screen enough farther so that the anal aperture of the rectal gill chamber was just dipping into the surface film, and stayed there immovable for two days. Then each transformed the following night, and was ready to begin aerial activity the next morning; its shining wings, tinted with gold and streaked with brown at the base, fully expanded; its cast-off gills left behind in the nymphal skin.

One day had been given to introducing the aerial, two days to tapering off the aquatic mode of respiration.